Microprocessor and Computer Architecture

UE21CS251B

4th Semester, Academic Year 2022-23

Date:

Name: Yaman Gupta	SRN: PES2UG21CS619	Sectio n	j

Week#____1_____ Program Number:

____1___

Title of the Program

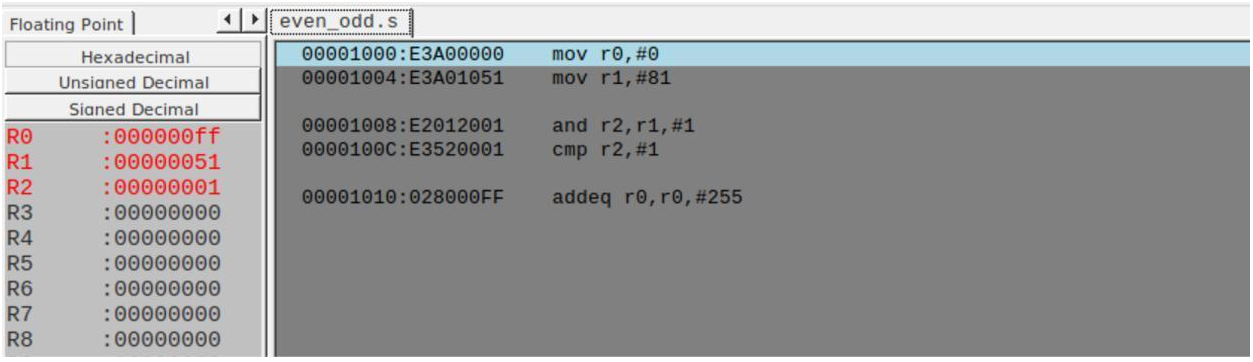
Write an ALP using ARM instruction set to check if a number stored in a register is even or odd. If even, store 00 in R0, else store FF in R0

I. ARM Assembly Code

```
mov r0,#0
mov r1,#81

and r2,r1,#1
cmp r2,#1

addeq r0,r0,#255

~
~
```

II. Output Screen Shot (Two)

The output should be verified for both even and odd numbers.



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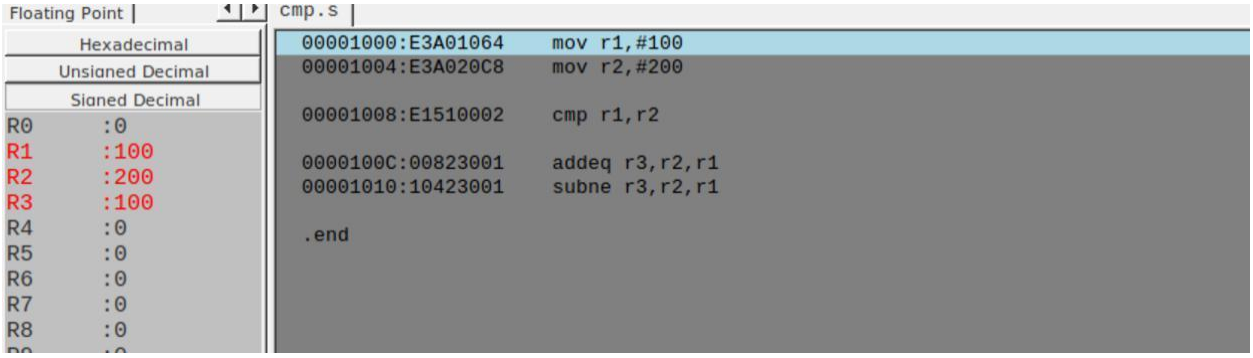
Week#____1_____ Program Number: ____2___

Title of the Program

Write an ALP to compare the value of R0 and R1, add if R0 = R1, else subtract

I. ARM Assembly Code



II. Output Screen Shot (Two)

The output should be verified for both equal and nor equal values

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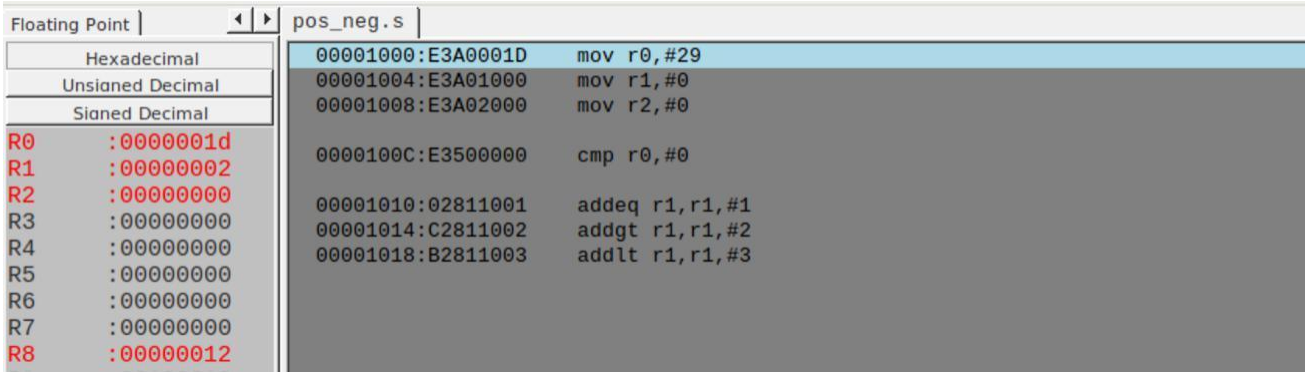
Week#____1_____ ____3___

Program Number:

Title of the Program

Based on the value of the number in R0, Write an ALP to store 1 in R1 if R0 is zero, Store 2 in R1 if R0 is positive, Store 3 in R1 if R0 is negative. (Program shown in class)

I. ARM Assembly Code



II. Output Screen Shot (Three)

The output should be verified for zero, positive and negative cases.

```
mov r0,#29
mov r1,#0
mov r2,#0

cmp r0,#0

addeq r1,r1,#1
addgt r1,r1,#2
addlt r1,r1,#3

.end
```

Disclaimer:

- The programs and output submitted is duly written, verified and executed by me.

- I have not copied from any of my peers nor from the external resource such as internet.

- If found plagiarized, I will abide with the disciplinary action of the University.

Signature: Yaman Gupta

Name: Yaman Gupta

SRN: PES2UG21CS619

Section: J

Date: 18/01/2023